

Application No.: 09/623,071

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COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

1. (Currently Amended) A method for non-destructive evaluation of a sample, comprising the steps of:
obtaining a defect image of said sample by collecting infrared light irradiated from said sample,
displaying a real time image of said sample on a display device, wherein the defect image and the real time image of said sample have a one-to-one correspondence with each other; and
superimposing one of the defect image and the real time displayed image onto [on] the other of the defect image and the real time displayed image.
2. (Previously Presented) The method of claim 1, further comprising the steps of:
locating a defect in the sample by way of the defect image;
referencing the sample while viewing said superimposed real time image and the referenced defect image on said display device.
3. (Previously Presented) The method of claim 2, wherein the step of referencing the sample includes the step of marking the sample according to the referenced defect image.
4. (Previously Presented) The method of claim 2, wherein the step of referencing the sample includes the step of measuring a characteristic of the sample at a selected location.
5. (Currently Amended) A method for non-destructive evaluation of a sample, comprising the steps of:

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obtaining a defect image of said sample,
displaying a real time image of said sample on display device, wherein the defect image
and the real time image have a one-to-one correspondence with each other;
displaying the defect image on a digital display device;
superimposing the defect image onto the display of the real time image; and
referencing the sample while viewing, on the display device, the superimposed real time
and defect images wherein the defect image is an infrared image, and wherein the defect image
and the live image are obtained from an infrared camera.

6. (Cancelled)

7. (Currently Amended) The method of claim 5[6], further comprising the steps of:
changing the temperature of the sample; and
obtaining at least one defect image over a time period of temperature change of said
sample.

8. (Previously Presented) The method of claim 7, wherein the changing step includes
directing a heating pulse onto the sample such that the heat is distributed generally evenly over
the sample.

9. (Previously Presented) The method of claim 7, wherein the changing step includes
directing continuous heat onto the sample such that the heat is distributed generally evenly over
the sample.

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10. (Unchanged) The method of claim 5, wherein the reference step includes the steps of:

measuring a characteristic of the sample at a selected location; and
annotating the defect image with data obtained from the measuring step.

11. (Currently Amended) The method of claim 5[6], wherein the referencing step includes the steps of:

measuring a characteristic of the sample at a selected location; and
annotating the defect image with data obtained from the measuring step.

12. (Unchanged) The method of claim 5, wherein the obtaining, displaying, superimposing and referencing steps are automated and conducted in a computer.

13. (Currently Amended) An apparatus for non-destructive testing/evaluation of a sample, comprising:

a camera that captures a defect image and generates a real time image of the sample;
a processor coupled with the camera to digitize the defect image and the real time image;
a display for displaying the digitized defect image and the real time image, wherein the processor and the display include means for referencing the defect image and superimposing one of the defect image and the real time image onto the other of the defect image and the real time image wherein the camera is an infrared camera, and wherein the apparatus further comprises:
a hood having a reflective interior and an opening for the camera at a back portion and an open end at the front portion, wherein the sample is disposed in the front portion of the hood; and
at least one heating lamp disposed inside the hood to heat the sample.

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14. (Unchanged) The apparatus of claim 13, wherein the processor and the display are constructed as part of the camera.

15. (Cancelled)

16. (Currently Amended) The apparatus of claim 13[15], wherein the hood has a door to allow physical access to the sample by the user.

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Currently Amended) A computer readable storage device for non-destructive evaluation of a sample, comprising the steps of:

obtaining a defect image and a real time image of the sample, the defect image and the real time image having a one-to-one correspondence with each other;

displaying the defect image on a digital display;

superimposing the defect image onto the real time image on the display; and

referencing the sample while viewing the real time image and the defect image on the display wherein the defect image is an infrared image, and wherein the defect image and the real time image are obtained from an infrared camera.

22. (Cancelled)

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23. (Currently Amended) The computer readable storage device of claim 21[22], further comprising the steps of:
changing the temperature of the sample; and
obtaining at least one defect image over a period of time where the sample temperature is changing.

24. (Unchanged) The computer readable storage device of claim 23, wherein the changing step includes directing a heating pulse onto the sample such that the heat is distributed evenly over the sample.

25. (Unchanged) The computer readable storage device of claim 23, wherein the changing step includes directing continuous heat onto the sample such that the heat is distributed evenly over the sample.

26. (Unchanged) The computer readable storage device of claim 21, wherein the referencing step includes the step of:
measuring a characteristic of the sample at a selected location; and
annotating the defect image with data obtained from the measuring step.

27. (Currently Amended) The computer readable storage device of claim 21[22], wherein the referencing step includes the steps of :
measuring a characteristic of the sample at a selected location; and
annotating the defect image with data obtained from the measuring step.

28. (Unchanged) The computer readable storage device of claim 21, wherein the obtaining, displaying, superimposing and referencing steps are automated and conducted in a computer.